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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,140

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EXAMINER

OLSON, LARS A

ART UNIT

PAPER NUMBER

3617

MAIL DATE

DELIVERY MODE

02/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,140	Applicant(s) PATERSON ET AL.	
	Examiner Lars A. Olson	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 18 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 23, 2008 has been entered.

2. An amendment was received from the applicant on January 23, 2008.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 5,480,330) in view of Blanchard (US 6,273,768) and Austin (US 3,601,989).

Brown discloses a marine propulsion water pump, as shown in Figure 1, that is comprised of an upstream impeller, defined as Part #61, a downstream impeller,

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defined as Part #81, a pump housing, defined as Part #43, a water inlet, defined as Part #21, and a water outlet, defined as Part #33, where said impellers are mounted on coaxial shafts, defined as Parts #123 and 133, located within said pump housing, said impellers are spaced apart and rotatable in opposite directions, as described in lines 49-57 of column 3, said impellers are further comprised of a plurality of impeller blades, defined as Parts #65 and 85, and said upstream impeller has blades that are opposite in pitch to those of said downstream impeller, as shown in Figure 1.

Brown, as set forth above, discloses all of the features as claimed except for the use of first and second impellers, where one of said impellers is arranged to impart less energy to a flow of water than the other impeller, two impellers that are driven by a single engine by reduction gearing, two impellers that are driven by separate engines, and an outlet that directly communicates with a downstream impeller.

Blanchard discloses a water jet propulsion unit, as shown in Figure 2, that includes an upstream impeller, defined as Part #28, and a downstream impeller, defined as Part #42, each having a plurality of axial flow blades that rotate in opposite directions to one another, where one of said impellers can be arranged to rotate at a different speed from the other impeller, as described in lines 13-20 of column 5, in order to impart less energy to a flow of water than the other impeller. Also included is an outlet nozzle, defined as Part #70, that is removable, as shown in Figure 2, and can thus be varied in size in order to vary the cross-sectional diameter of a nozzle outlet, defined as Part #71, as indicated in lines 47-54 of column 5.

Austin discloses a marine propulsion system, as shown in Figure 1, with first and second impellers, defined as Parts #26 and 28, that can be either both driven by a first engine, defined as Part #70, by means of reduction gearing, as shown in Figure 1, or separately driven by said first engine and a second engine, defined as Part #50, where said second engine can only drive said first impeller, said first engine can drive said second impeller, and an outlet or exit nozzle, defined as Part #22, directly communicates with downstream impeller #26, as shown in Figure 1.

The use of an impeller having a specific number of blades arranged in a specific configuration would be considered by one of ordinary skill in the art to be a design choice based upon the desired thrust output and required blade surface area of said impeller.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize first and second counter-rotating impellers that can be rotated at different speeds, as taught by Blanchard, and first and second impellers that can either be both driven by a first engine, or separately driven by first and second engines, with an outlet that directly communicates with a downstream impeller, as taught by Austin, in combination with the marine propulsion water pump as disclosed by Brown for the purpose of providing a water propulsion unit with a means for canceling out the water swirling effects caused by a first impeller with a counter-effect caused by a second impeller turned in the opposite direction.

Allowable Subject Matter

5. Claims 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed on January 23, 2008 regarding claims 1-17, 19, 21 and 22 have been fully considered but they are not persuasive.

7. The applicant argues that Brown (US 5,480,330) in combination with the teachings of Blanchard (US 6,273,768) and Austin (US 3,601,989) does not show or suggest the use of a low pressure high mass water jet propulsion unit as claimed by the applicant.

8. In response to the applicant's argument, the use of the relative terms "low pressure" and "high mass" in the applicant's claims does not carry patentable weight, since no specific pressure or mass range is indicated by these terms. Brown, Blanchard and Austin all disclose water jet propulsion systems, but do not provide any specific limitations regarding the water pressure and mass of these systems during operation. Since no specific water pressure or mass limitations are indicated by the prior art of record, then it is reasonable for the examiner to interpret these systems as being capable of functioning at any given water pressure, resulting in a consistent water mass flow from these systems for the given pressure. Therefore, for the reasons given

above, the rejection of claims 1-17, 19, 21 and 22 is deemed proper and is not withdrawn.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (571) 272-6685.

lo

February 1, 2008

/Lars A Olson/

Primary Examiner, Art Unit 3617